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A New Pygmy Pipehorse (Pisces: Syngnathidae: *Idiotropiscis*) from Eastern Australia

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ABSTRACT. A new species of pygmy pipehorse, *Idiotropiscis lumnitzeri*, is described from a female and two male specimens collected in the Sydney region, New South Wales, Australia. It can be distinguished from its congeners, *I. australe* (Waite & Hale, 1921) and *I. larsonae* (Dawson, 1984), in having a shorter and more posteriorly positioned frontal ridge dorsally on the head, a very short trunk (slightly longer than head, versus clearly longer than head), and in having a longer snout (2.2–2.6 in head, versus 2.8–3.2 in *I. australe* and 3.7–3.8 in *I. larsonae*).

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I became aware of this species in the early 1990's when sent an image of a pipehorse by a photographer from Sydney for identification. The subject of the photograph, taken in Jervis Bay, south of Sydney, was thought by the photographer to be a juvenile seahorse. I tentatively identified it as *Acentronura tentaculata*. The first specimen collected in 1997 was immediately recognized as representing a new species of *Idiotropiscis* Whitley, 1947, a genus that is very similar to *Acentronura* Kaup, 1853 and treated by some authors as a subgenus of it (e.g., Dawson, 1985). Species of *Idiotropiscis*, however, are more seahorse-like than those of *Acentronura*, in having a deeper body and head that is clearly angled ventrad from the longitudinal axis of the body, and in having discontinuous superior trunk and tail-ridges. Kuiter (2000) recognized *Idiotropiscis* at the generic level. The specimen collected in 1997 and two more specimens collected in 2002 provide the basis for this description.

Materials and methods

Methodology follows Kuiter (2001), except total length (TL), measured from tip of snout to end of tail, is used as a measure of overall length. Specimens were placed in a purpose-built, tray-like aquarium and photographed with a 35 mm single-reflex camera and 105 mm macro lens. Specimens were laid on their side on the bottom of the aquarium and flattened under a sheet of glass to ensure an accurate lateral image. Proportional measurements were recorded from enlargements. Radiographs were used to determine and confirm the number of trunk and tail rings. Sex was inferred from the absence or presence of a brood pouch. Types are deposited in the collection of the Australian Museum, Sydney (AMS) and Museum Victoria (NMV).

Idiotropiscis lumnitzeri n.sp.

Sydney's Pygmy Pipehorse

Figs. 1, 2

Idiotropiscis sp 1.—Kuiter, 2000, 66–67.

Type material. HOLOTYPE: AMS I.38660-001, 55.2 mm TL, male, Henrietta Head, La Perouse, Sydney, New South Wales (34°00'S 151°15'E), 22 m, Á. Lumnitzer, 26 Oct 1997. PARATYPES: AMS I.41409-001, 35.5 mm TL, male, Oak Park, Cronulla, New South Wales (34°03'S 151°09'E), 9 m, Á. Lumnitzer, 28 Jun 2002; NMV A24724, 35.0 mm TL, female, Oak Park, Cronulla, New South Wales, 9 m, Á. Lumnitzer, 28 Jun 2002.

Diagnosis. Superior trunk and tail ridges discontinuous; rings 11 + 43–44; dorsal-fin rays 15–16; pectoral-fin rays 13; subdorsal rings 2.5 + 1.5; head length 86–91% of trunk length, and angled ventrad approximately 25° from longitudinal axis of body; trunk length 18–20% TL; snout length 2.2–2.6 in head length; top of head with prominent, tall, frontal ridge.

Description. Head large, 86% (89–91%) of trunk length, and angled ventrad approximately 25° from longitudinal axis of body; snout short, length 28% (27–31%) of head length, depth 46% (45–47%) of its length; trunk very deep, its greatest depth 73% of its length (holotype brooding, 45–51% in non-brooding paratypes), narrowest at third and fourth ring where curving and forming angle of head from longitudinal axis of body, giving neck-like appearance as in seahorses, but less pronounced; rings 11 + 43 (43–44); superior trunk-ridge ending below dorsal-fin base, above origin of superior tail-ridge, ridges overlapping over one ring; brood pouch spanning 10 tail rings; subdorsal rings 2.5 + 1.5; dorsal-fin rays 15 (15–16), fin base arched dorsally at centre, pectoral-fin rays 13.

Top of head with prominent, tall, frontal ridge, originating well behind eye, with thick, long, branched, fleshy dermal appendage, reaching forward to above tip of snout. Numerous simple to fern-like branched, fleshy dermal appendages on head and body, best developed above eye, under snout and at various intersections of rings and superior ridges on trunk and tail, manifested as 6 or 7 symmetrical pairs from about centre of trunk to about 20th tail ring, pairs separated by about 5 rings and becoming gradually smaller posteriorly.

Live coloration (based in part on photographs in Kuiter, 2000: 66 & 67, figs. A–L): white to dark grey with brown to red blotches or irregular banding; sometimes uniformly burgundy-red. Fleshy appendages mostly red with grey branches or tips.

Preserved coloration (in alcohol). Uniformly dark brown.

Etymology. This species is named after Á. Lumnitzer, who collected the type specimens.

Distribution and ecology. This species is primarily known from photographs taken in the Sydney region (Clovelly, Cronulla and Botany Bay), and Jervis Bay. It is reported to occur in depths of 6–30 m, over semi-exposed rocky reefs, sparsely covered with bushy red-algae in which the species is extremely well camouflaged (Fig. 2). According to M. Brooke (pers. comm.), who monitored populations over an eight-year period, individuals live on the same small sections of reef for long periods, with some seen regularly for up to about 8 months.

Remarks. *Idiotropiscis lumnitzeri* is geographically separated from its congeners. *Idiotropiscis australe* occurs in South Australia and the southern region of Western Australia, and *I. larsonae*, is only known from the Monte Bello Islands, Western Australia. *Idiotropiscis lumnitzeri* is readily distinguished from *I. australe* in having 11, versus 12 trunk rings, and in having a much shorter trunk that is only slightly longer than its head, versus almost twice the length of the head, and from *I. larsonae* in its shorter trunk that increases greatly in depth anteriorly from just behind the head to the origin of the dorsal fin, versus a nearly even depth over the same distance.

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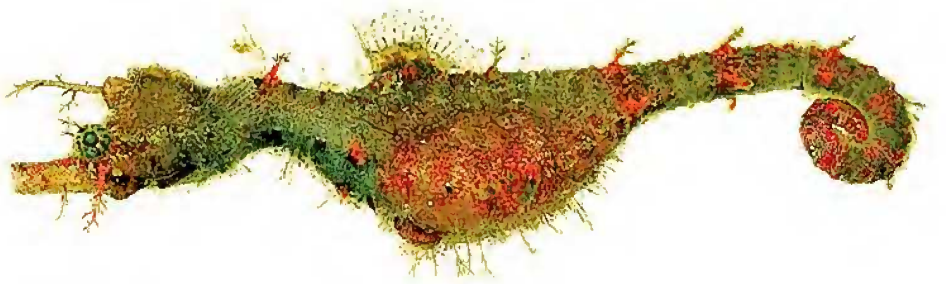

Fig. 1. *Idiotropiscis lumnitzeri*, AMS I.38660-001, holotype, male, 55 mm TL, Sydney, New South Wales. Photograph by Stuart Humphrey.

Fig. 2. *Idiotropiscis lumnitzeri*, male and female, approximately 45 mm TL, Cronulla, Sydney, New South Wales. Photograph by Matthew Brooke.